

U.S.S.N. 09/779,427

Filed: February 8, 2001

AMENDMENT AND RESPONSE TO OFFICE ACTION

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In the Specification

Please replace the paragraph bridging pages 1 and 2 with the following paragraph.

-- The present invention relates to a process for the production of poly(hydroxyl acids) by means of recombinant bacteria which contain and express at least one fragment of the gene of poly(hydroxy fatty acid) synthase from *Thiocapsa pfennigii* and which are selected from the group comprising: *Pseudomonas putida* GPp104 (pHP1014::E156), *Alcaligenes eutrophus* PHB 4 (pHP1014::E156), *Pseudomonas putida* GPp104 (pHP1014::B28+) [DSM # 9417] and *Alcaligenes eutrophus* PHB 4 (pHP1014:B28+) [DSM # 9418], whereby the bacteria are cultivated in a mineral medium under aerobic conditions, whereby one offers the bacteria at least one substrate carbon source which is selected from the group consisting of: levulinic acid, salts of levulinic acid, esters of levulinic acid, lactones of levulinic acid, substituted levulinic acid or, as the case may be, its derivatives; 5-hydroxyhexanoic acid, its salts, esters and lactones; 4-hydroxyheptanoic acid, its salts, esters and lactones; 4-hydroxyoctanoic acid, its salts, esters and lactones; their halogenated derivatives as well as their mixtures; one incubates the bacteria for a certain time with the carbon source; and one isolates the poly(hydroxyl fatty acid) polymers that have been synthesized by the bacteria;

a recombinant bacterial strain characterized by the feature that the bacterial strain is selected from the group which comprises *Pseudomonas putida* GPp104 (pHP1014::B28+) [DSM # 9417] and *Alcaligenes eutrophus* PHB 4 (pHP1014::B28+) [DSM # 9418];

a poly(hydroxyl fatty acid) produced by any one of the previously described processes;

and a DNA fragment which codes for a pha E component and a pha C component of the poly(hydroxyl fatty acid) synthase from *Thiocapsa pfennigii* characterized by the feature that it has at least the nucleotide sequence of

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sequence sections 180 through 1280 (*phaE*) and 1322 through 2392 (*phaC*) of the DNA sequence SEQ ID NO:1.--

Please replace the paragraph bridging pages 10 and 11 with the following paragraph.

-- From a process technical standpoint, the above problem is solved by a process for the preparation of poly(hydroxy fatty acids) with at least one subunit by means of recombinant bacteria which contain and express at least one fragment of the gene of poly(hydroxy fatty acid) synthase from *Thiocapsa pfennigii* and which are selected from the group comprising: *Pseudomonas putida* GPp104 (pHP1014::E156), *Alcaligenes eutrophus* PHB 4 (pHP1014::E156), *Pseudomonas putida* GPp104 (pHP1014::B28+) [DSM #9417] and *Alcaligenes eutrophus* PHB 4 (pHP1014:B28+) [DSM # 9418], whereby the bacteria are cultivated in a mineral medium under aerobic conditions, whereby one offers the bacteria at least one substrate carbon source which is selected from the group consisting of: levulinic acid, salts of levulinic acid, esters of levulinic acid, lactones of levulinic acid, substituted levulinic acid or, as the case may be, its derivatives; 5-hydroxyhexanoic acid, its salts, esters and lactones; 4-hydroxyheptanoic acid, its salts, esters and lactones; 4-hydroxyoctanoic acid, its salts, esters and lactones; their halogenated derivatives as well as their mixtures; one incubates the bacteria for a certain time with the carbon; and one isolates the poly(hydroxy fatty acid) polymers that have been synthesized by the bacteria.--

Please replace the paragraph bridging pages 11 and 12 with the following paragraph.

-- In accordance with the process for the preparation of poly(hydroxy fatty acids) with at least one subunit by means of recombinant bacteria which contain and express at least one fragment of the gene of poly(hydroxy fatty acid) synthase from *Thiocapsa pfennigii* and which are selected from the group comprising: *Pseudomonas putida* GPp104 (pHP1014::E156), *Alcaligenes eutrophus* PHB 4 (pHP1014::E156), *Pseudomonas putida* GPp104 (pHP1014::B28+) [DSM #9417] and *Alcaligenes eutrophus* PHB 4 (pHP1014:B28+) [DSM # 9418], whereby the bacteria are cultivated in a mineral medium under aerobic conditions, whereby one offers the bacteria at least one substrate carbon source which is selected from the group consisting of: levulinic acid, salts of levulinic acid, esters of levulinic acid, lactones of levulinic acid, substituted levulinic acid or, as the case may be, its derivatives; 5-hydroxyhexanoic acid, its salts, esters and lactones; 4-hydroxyheptanoic acid, its salts, esters and lactones; 4-hydroxyoctanoic acid, its salts, esters and lactones; their halogenated derivatives as well as their mixtures; one incubates the bacteria for a certain time with the carbon; and one isolates the poly(hydroxy fatty acid) polymers that have been synthesized by the bacteria.--